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NEVILLE LAND COMPANY
1900 Grant Building
Pittsburgh, Pennsylvania 15219

November 22, 1994

VIA FACSIMILE AND FIRST CLASS MAIL

Mr. Abraham Ferdas
Superfund Office
Associate Division Director
U.S. EPA/Region III 3HW02
841 Chestnut Building
Philadelphia, PA 19107-4431

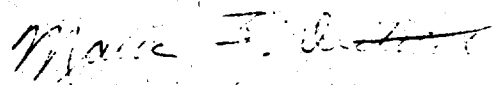
Re: Ohio River Park Site

Dear Mr. Ferdas:

This will confirm that your letter to Mr. Blaxter dated November 18, 1994 accurately reflects the agreement reached with respect to Neville Land Company's recent dispute relating to EPA's action on the DERA. Accordingly, NLC withdraws its current Request for Dispute Resolution.

Please note, however, that as of this date NLC has still not received the final Human Risk Assessment from Region III. Our records reflect that Region III is preparing a "supplement" to the HRA. To facilitate completion of the tasks remaining to be done under AOC it is important that a final HRA (with a central risk tendency analysis) be completed.

Very truly yours,



Marian F. Dietrich
Vice President, Neville Land Company

cc: H. Vaughan Blaxter, III
Thomas C. Reed
Robert Davis
Eric Johnson
Romuald A. Roman
Jeffrey A. Pike
Gwen E. Pospisil



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

November 18, 1994

VIA TELEFAX AND FIRST CLASS MAIL

H. Vaughan Blaxter, III
President
Neville Land Company
19th Floor, Grant Building
Pittsburgh, Pennsylvania 15219

Re: Ohio River Park Site -- Neville Land Company ("NLC") Dispute Concerning the Draft Ecological Risk Assessment ("DERA") Submitted by NLC Under the Administrative Order by Consent for Remedial Investigation/Feasibility Study as Amended by the First Amendment ("AOC"), Docket No. III-74-DC

Dear Mr. Blaxter:

This will confirm that NLC and the United States Environmental Protection Agency, Region III ("EPA") have agreed to resolve the above dispute as follows:

1. EPA acknowledges that it remains NLC's position that:
(a) the DERA submitted to EPA by NLC in July of 1994 was "in accordance" with the terms of the AOC in this matter and should therefore have been approved; and (b) it is inappropriate to quantify ecological risk in the manner set forth in EPA's Data Interpretation and Ecological Risk Assessment ("Data Interpretation"), a copy of which is attached hereto.

2. NLC acknowledges that it remains EPA's position that:
(a) the DERA was not fully prepared in accordance with the terms of the AOC in this matter and that only Sections 1.0 - 3.0 thereof have been formally approved by EPA; (b) it is appropriate to quantify ecological risk in the manner set forth in EPA's Data Interpretation; and (c) EPA's Data Interpretation and Sections 1.0 - 3.0 of the DERA together constitute the EPA-approved Ecological Risk Assessment for the Ohio River Park Site.

3. With respect to these issues EPA and NLC "agree to disagree," with the understanding that the rights of each party to have the merits of these disputes resolved in another forum, at the appropriate time, are fully reserved.

4. Although EPA has approved only Sections 1.0 - 3.0 of the DERA, it is also agreed that the entire DERA as submitted shall become a part of the Administrative Record ("AR") and, as appropriate, can be considered in this matter.

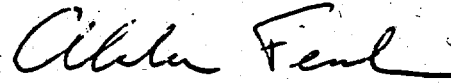
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H. Vaughan Blaxter, III
November 18, 1994
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5. EPA's Data Interpretation to be included in the AR is attached hereto.

If the foregoing accurately sets forth our agreement, please forward to my attention a letter withdrawing NLC's current Request for Dispute Resolution.

Sincerely,



Abraham Ferdas
Superfund Office
Associate Division Director

Attachment

cc: Thomas C. Reed, Esquire
Robert Davis (3HW13)
Eric Johnson (3HW13)
Romuald Roman (3HW23)
Jeffrey Pike (3HW23)
Gwen E. Pospisil (3RC23)

AR200087

Ohio River Park Site

U.S. Environmental Protection Agency
Region III

Data Interpretation And Ecological Risk Assessment

Introduction

The objective of this project was to prepare a screening level ecological risk assessment for the Ohio River Park Site, Neville Township, Pennsylvania. The following discussion summarizes EPA's interpretation of the site data and of the ecological risk posed by contaminants at the Ohio River Park site. The ecological risk assessment for the project will be the first three chapters of the July 1994 Ecological Risk Assessment report ("July 1994 ERA") prepared by ENSR, on behalf of Neville Land Company, and the following discussion prepared by EPA.

The data in the Remedial Investigation (RI) and in the first three chapters of the July 1994 ERA indicate that all media (except air) at the site show some level of risk due to site contaminants.

EPA Region III determines quantitative estimates of cumulative risk by adding the Ecological Effects Quotients (EEQ) of all contaminants with an EEQ greater than one. The values are added according to the formula shown here:

$$R = r^1 + r^2 + r^3 + \dots$$

Where R = Total Risk
 r = risk of individual contaminants

For example, the calculations for cumulative risk in the surface water, main channel involves the following:

$$R = EEQ^{Hg} + EEQ^{Cu(+2)} + EEQ^{Cr(as\ VI)}$$

$$R = 55.83 + 8.38 + 1.10$$

$$R = 65.31$$

Those calculations that show a result higher than one (1) are considered to demonstrate a potential risk. Values higher than ten (10) are considered to represent moderately high potential risk, and those above one hundred (100) are considered to represent extreme potential risk. Risk to the guild and community level of a habitat is estimated by adding the EEQs. The concept here views the habitat as a whole with the potential for risks from contaminants impacting all organisms. It differs fundamentally from the way additive effects are calculated in

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human health risk assessment. In ecological risk assessment, it is assumed that impacts are either evenly severe to all members of the community or devastating impacts to a few species and fatally destructive to the community, ultimately.

Ecological Risk Assessment

The following discussions are arranged according to the media as presented in Chapter 3 of the July 1994 ERA.

A. Surface Water (Main Channel)

Mercury has been identified at high levels in the surface water of the main channel of the Ohio River. It is possible that some of this contaminant comes from the site, as Table B-1, Appendix B, of the July 1994 ERA fails to indicate any mercury reported from the background samples. Two other contaminants also show EEQ levels above one and are considered to be of possible concern. These are copper and chromium (VI), neither of which is included in Table B-1, and are likely to arise from the site as well.

All three of these contaminants carry ecological implications and should be viewed as potentially harmful to the ecosystem of the Ohio River. Their effects on the river are expected to be chronic and long-term.

Mercury has an EEQ of over 55; copper(+2) has an EEQ of 8.38 and total chromium (as VI) has an EEQ of 1.10.

The cumulative risk for surface water in the main channel equals $6.531E+1$. This level of potential ecological risk is considered to be serious.

B. Surface Water (Back Channel)

Two contaminants appear to have many implications for ecological impacts: chromium (VI) and copper (2). The EEQ values are 1.51 and 1.43, respectively, and the additive value is 2.94. It is likely that the site is a source of these contaminants, as the levels reported are significantly above background (see Table 3.2 of the July 1994 ERA). These levels of potential ecological risk are considered to be of possible long-term risk to ecological receptors.

C. Sediment (Main Channel)

Many contaminants listed in Table 3.3 not only show concentrations above criteria levels, but several are elevated above background. The contaminants above background with EEQs above 1 are: arsenic, chromium, copper, mercury, lead, nickel,

zinc, 4,4'-DDD, alpha chlordane, PCBs, dieldrin, endrin, gamma chlordane, benzo(a)anthracene, 2-methylnaphthalene, and fluorene. In addition, several others are considered to be of ecological significance, but had no EEQ calculations could be performed due to a lack of information. These are: barium, cobalt, cyanide, manganese, selenium, vanadium, 2,4,5-T, 2,4,5-TP, 2,4-D, several arochlor congeners, endrin aldehyde, and endrin ketone.

Summing the calculations shows an EEQ of 781. This level of potential ecological risk is considered to be serious. From a conservative perspective, this number is actually very low due to the presence of several contaminants which have not been included in the cumulative risk calculations. The biological implications of these contaminants cannot be ignored in judging risk potential. These are cyanide, selenium, 2,4,5-T, 2,4,5-TP, 2,4-D, many PCB congeners, and breakdown products of endrin. The site may be a likely source of contamination of the sediments in the main channel.

D. Sediment (Back Channel)

All of the discussions above on the sediments in the main channel also apply to sediments in the back channel. The additive EEQ calculation is 1305 and every contaminant identified and appearing in Table 3.4 of the July 1994 ERA is above levels identified at the background stations, indicating a potential level of ecological risk which is considered serious. Again, the site is a likely source of contamination of the sediments in the back channel.

E. Soil

As with the sediments in the back channel, most of the contaminants in the soils are found at levels above background concentrations. Although only six of these contaminants have EEQ's over 1, the result was a total EEQ of 42.7. This shows a high potential for risk.

Many other contaminants were not included in the calculation of soil EEQs, but many have serious biological implications. Examples are cyanide, thallium, vanadium, 2,4,6-trichlorophenol, 2,4-dichlorophenol, naphthalene, phenol, 2,4,5-T, 2,4,5-TP, 2,4-D, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, alpha BHC, alpha chlordane, several as well as total PCBs, beta & delta BHCs, dioxin, dieldrin, 3 endosulfan formulations and endrin.

F. Groundwater

Statements made above regarding soils and sediments apply to the groundwater situation as well. The cumulative potential risk value is 549, which places it in the serious category of risk. Groundwater is crucial in the risk assessment because it is

a pathway by which contamination reaches the river.

Here, too, several contaminants of ecological concern were left out of the EEQ calculations in the July 1994 ERA. These were 2,4-dimethylphenol, 2-methylphenol, 4-methylphenol, di-n-butylphthalate, di-n-octylphthalate, 2,4,5-T, 2,4,5-TP, 2,4-D, 4,4'-DDE, alpha BHC, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 2-butanone, acetone, benzene, bromoform, carbon disulfide, chloroethane, methylene chloride, and toluene. This is due mainly to a lack of AWQC chronic toxicity values. Some of these are economic poisons (pesticides) for which chronic toxicity values have been developed for other media; therefore, they are known toxicants for which chronic numbers could be developed from literature sources. Still others (e.g., phthalate esters) have generic toxicity numbers which were not used in any calculations, because of the fact that the numbers are generally applied to all members of the chemical group in question. The levels above background, however, are indications that the groundwater is a likely secondary source and pathway of contamination to the river.

Summary and Conclusions

Risk calculations for all media (except air) have been carried out in ENSR's July 1994 ERA and they show potential for risk from many site related contaminants. Cumulative risk assessment calculations were carried out on those contaminants for the media where the EEQ exceeds one. The calculations were based upon those contaminants for which ENSR developed EEQs, but did not include all contaminants where levels exceeded background.

Even with this limited data base, it is clear that a potential for ecological risk exists in all media sampled. It can also be concluded that the potential risk is associated with contaminants that come from the site, as the background ratios show (see Tables 3.1 through 3.6 of the July 1994 ERA). In many cases, the ratios are elevated above background by many orders of magnitude, indicating that the site is a source of contamination to the Ohio River in the vicinity of Neville Island (see Table 3.6 of the July 1994 ERA). Contaminants from the site likely have contributed and likely can be expected to continue to contribute to the degraded condition of the river, and the levels reported by ENSR indicate a potential for risk.